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Perceived Parenting Style, Adolescent Family Life Satisfaction, and Self-Esteem as Predictors of Adolescent Substance Use

Megan Cox

Eastern Illinois University

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Perceived Parenting Style, Adolescent Family Life Satisfaction,
and Self-Esteem as Predictors of Adolescent Substance Use
(TITLE)

BY

Megan Cox

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2001

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Running Head: PREDICTORS OF ADOLESCENT SUBSTANCE USE

Perceived Parenting Style, Adolescent Family Life Satisfaction, and Self-Esteem as
Predictors of Adolescent Substance Use

Megan Cox
1977-
Eastern Illinois University

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Abstract

This study was conducted to identify predictors of adolescent substance use. Eighty-seven junior high school students completed the Rosenberg Self-Esteem Scale, Adolescent Family Life Satisfaction Index, Parental Authority Questionnaire, and the Michigan Alcohol and Other Drug School Survey. When examining self-esteem, adolescent family life satisfaction, and perceived parenting style, it was found that the authoritarian father parenting style was the best predictor of total adolescent substance use and, more specifically, tobacco use. Self-esteem and the authoritarian father parenting style were found to be the best predictors of adolescent alcohol use. Furthermore, the authoritarian father parenting style was significantly correlated with alcohol use, other drug use and total drug use. Lastly, self-esteem was found to be significantly negatively correlated with total substance use, tobacco use, alcohol use, marijuana use, and amphetamine use. Subjects in this study reported wide use of drugs, including alcohol, tobacco, marijuana, amphetamines, and inhalants. There were significant differences between male and female students' use of substances. Males were more likely to use tobacco and inhalants, while females were more likely to use marijuana. A significant difference between parents' marital status and substance use was also found. Adolescents from intact homes were less likely to engage in tobacco use, alcohol use, marijuana use, and overall substance use than were adolescents from divorced homes. Limitations, practical applications, and future directions of this study are also discussed.

Introduction

Adolescent development is a very important stage in normal human development. An individual's personality and self-image continue forming throughout adolescence and help determine the type of adult he/she will become. There are many factors that influence how adolescents adjust to their development and some of these influences may be negative. Turning to substances, like alcohol and drugs, to cope with difficulties involved in adolescent development has become a common strategy among adolescents today. Society's impact on how adolescents view themselves can be detrimental to their self-image. Family environment may also have an impact, either positive or negative, on adolescent development. The development process affects how an adolescent thinks, feels and behaves.

Adolescent substance use has become a major concern in our society. This may be due to the fact that substance use is beginning at younger ages and at a greater frequency than professionals first suspected (McNeal & Hansen, 1999). "In 1996, the Monitoring the Future study found that almost one third of high school seniors reported having been drunk in the past month, and one fifth of seniors and tenth graders reported using marijuana in that period," (Weinberg, Rahdert, & Colliver, 1998, p.252). Given that substance use, on average, begins at an earlier age it is important to study middle school students. When studying adolescents, those in high school should not be the only students examined. Since the risk for initiating drug use greatly increases from childhood through the age of 18 years, younger students need to be examined to determine ways to decrease that risk (Kosterman, Hawkins, & Guo, 2000). It may be possible that substance

use could lead to risky behaviors (drinking and driving, sex, assault) so combatting the problem early will help to lessen those types of behaviors and other associated problems.

In this study, the relationship of perceived parenting style, adolescent family life satisfaction, and self-esteem to adolescent substance use was examined. Substance use is defined as the consumption/use of alcoholic beverages, tobacco, marijuana, inhalants and/or any other types of illegal depressants or stimulants on more than one occasion (McNeal & Hansen, 1999). Studying these effects to determine which is the best predictor of adolescent substance use can be significant in developing more appropriate prevention strategies and more successful treatment techniques. Parker, Calhoun, & Weaver (2000) found that regardless of ethnicity, older adolescents use alcohol more frequently and drink much greater amounts than younger adolescents, so developing intervention strategies that target early substance use may help decrease the risk of problematic alcohol use when they are older. Also, intervention strategies may have a greater influence on younger adolescents, because they either have not tried drugs or alcohol or have tried them in small amounts. Developing prevention programs for middle schools would be ideal, but effective intervention techniques are also important considering the younger ages at which children are beginning to experiment with drugs and alcohol.

Family Characteristics and Adolescent Substance Use

Family functioning plays an important role in adolescent development. Communication, support, and parental substance use have been linked to adolescent substance use, so it is important to consider what other family characteristics affect adolescent substance use (Anderson & Henry, 1994). Anderson and Henry (1994)

surveyed 489 high school students looking at several family system characteristics and parental behaviors as predictors of adolescent substance use. Some of the characteristics included family bonding, flexibility with regards to change in roles or rules, and parent-child communication. The parental behaviors that were studied included parental substance use, parental support, love withdrawal, and coercion. All data were collected through self-report questionnaires. Individual scales were used to determine the adolescent's perception of the level to which a specific characteristic was present in their family. For example, the bonding scale asked the adolescent to rate the statement "We have difficulty thinking of things to do as a family" with responses that range from almost never to almost always. Bivariate correlations and multiple regression analyses were used to test the significance of the hypotheses. The main purpose of the study was "to examine how adolescents' perceptions of certain family system characteristics and parental behaviors predict adolescent substance use" (Anderson & Henry, 1994, p. 405).

Results indicated a significant negative correlation between adolescent substance use and adolescent perceptions of openness in parent-adolescent communication, family flexibility (the ability to adapt to change), family bonding (the extent to which a family bonds emotionally into a meaningful unit), parental support, and parental induction (placing rational maturity demands on children to make them aware of the consequences to their actions). In other words, as these family characteristics increase, adolescent substance use decreases. According to Rothbart & Ahadi (1994) (as cited in Brook, Whiteman, & Finch, 2000) "A close bond between the parent and child is associated with the development of more effective self-regulation skills and social skills" (p. 47). If these skills are effective, the child may be less susceptible to peer pressure. A significant

positive relationship was found between adolescent substance use and love withdrawal (“actual or threatened withdrawal of affection”), coercion (“the use of direct and arbitrary force”), frequency of parental substance use, and problems with parental substance use (Anderson & Henry, 1994, p. 409). The authors also concluded that “the use of supporting parental behaviors including praise, approving, encouraging, assisting, companionship, and physical affection not only enhance overall parent-adolescent relations, it is related to decreased adolescent substance use” (Anderson & Henry, 1994, p. 414). In other words, specific family characteristics may be useful predictors of adolescent substance use.

Johnson and Pandina (1991) surveyed 1,380 subjects aged 12, 15, and 18 looking at the effects of the family environment on adolescent substance use, delinquency, and coping styles. Characteristics of the family environment included parental behaviors and attitudes, parenting styles, and family harmony and cohesion. The authors hypothesized that parent-child relationships that lacked love, warmth, and closeness and exhibited signs of hostility would be correlated with increased levels of adolescent substance use, delinquency, and dysfunctional coping strategies. “Parental attitudes have also been shown to be important determinants of children’s behavior... through verbal and nonverbal reinforcement within the home, children learn reasons for and against various patterns of behaviors” (Johnson & Pandina, 1991, p. 72). Research has also shown that a close mutual attachment between an adolescent and their parents tends to insulate most adolescents from drug use or decrease the risk of initiating drug use regardless of their age (Brook, Cohen & Jaeger, 1998).

The results of a multiple regression analysis suggested that parenting style (as measured by warmth and hostility) and parental tolerance of alcohol use were predictive of variations in each of the three problem domains. The degree of parental warmth, fighting, tolerance of alcohol use, and father's alcohol use were important in a child's choice of using alcohol to cope. Specifically, among the 12 year-old participants who reported drug use, parental use and father's warmth or hostility were the most important determinants of substance use (Johnson & Pandina, 1991). Even though parental alcohol use was a determinant of adolescent alcohol use regardless of age, parenting style was found to be more influential. The reason for this may be that if a child learns that there will be negative consequences to their actions, they may be less likely to drink even if they see their parents drinking. The verbal messages along with clear consequences and an understanding parent may be strong enough to override the visual message the parents are sending.

Stephenson, Henry, and Robinson (1996) surveyed 253 high school students looking at family characteristics and adolescent substance use. Some of the family characteristics examined were family celebration (special occasions spent together as a family like weddings or birthdays), family hardiness (internal strengths of a family that provide a sense of control), family time and routines, family coping coherence (how well the family deals with stressful situations), and adolescent family life satisfaction (the satisfaction or contentment in the relationships with the adolescent's parents and siblings). The researchers proposed an alternative to the application of family stress theory that views problems with adolescent substance use as one indicator of difficulties in adolescent adaptation to family stress. In other words, if an adolescent is not

responding well to what is going on within the family, they may turn to alcohol to cope. The authors believe that how the adolescent learns to cope with their problems may be predictive of their substance use.

Results indicated that all the characteristics studied were significantly negatively related to adolescent substance use (Stephenson, et. al., 1996). In other words, families that spend more time together and adapt to changes in the same way have lower rates of adolescent substance use. Close families tend to have less substance abuse problems, which might be explained by the fact that they work as a family to solve problems instead of turning to negative sources (i.e., alcohol) to cope with the stress. Family characteristics are not the only attributes that can be used to determine adolescent substance use. Parental behaviors should also be examined when studying adolescent substance use.

Parenting Style and Adolescent Substance Use

Perceived parenting style has also been hypothesized to be related to adolescent substance use (Cohen & Rice, 1997). Three primary types of parenting styles have been researched extensively: authoritative, authoritarian, and permissive (Baumrind, 1991). These styles vary on dimensions of demandingness (using discipline and defining consequences to actions) and responsiveness (warmth, loving, and understanding). The authoritative parenting style is more demanding and responsive, the authoritarian parenting style is demanding and unresponsive, and the permissive parenting style is non-demanding yet more responsive.

Pilgrim, Luo & Urberg (1999) examined perceived parenting style (the adolescent's perception of their parent's involvement in their life) as a predictor of

adolescent substance use. The authors surveyed 1,038 seventh, ninth, and eleventh grade students in the United States and 962 sixth, eighth, and tenth grade students in China to find cultural differences in the effects of peers, parents and individual characteristics on adolescent drug use. They predicted that for American students, perceived authoritative parenting would be associated with less substance use. In this type of family it is likely that there would be greater consequences for substance use. They also predicted that for Chinese students, both perceived authoritative and authoritarian parenting would be associated with less substance use. Authoritarian parenting does not have the negative effect on Chinese children as it does on American children, because it is the most common parenting style in Asia and therefore may be viewed as normative. Since the beliefs about family structure and respect are most likely different in Asia, the Authoritarian parenting style will probably affect the two ethnic groups differently.

Other variables studied included peer drug use and its effects on student behavior, and individual characteristics such as sensation seeking (Pilgrim, et. al., 1999). The researchers proposed that people who are high in sensation seeking would be more likely to engage in risky behavior. Previous studies have shown that substance abuse has also been related to a lack of fulfillment of an adolescent's needs in both males and females (Mainous, Martin, Oler, Richardson & Haney, 1996). Some examples of an adolescent's needs are getting attention from friends or family members, love or compassion, fitting into a social group, and being liked. According to their research, when adolescents cannot satisfy these needs, they may turn to alcohol or drugs to gratify those needs. In other words, if an adolescent does not fit into a social group or feel they are getting the

attention they should be getting from their parents they may begin drinking to attempt to fit in or to numb their true feelings and the pain these feelings may cause.

Results of the study (Pilgrim, et. al., 1999) indicated that, regardless of ethnicity, those who were high on sensation seeking were more likely to be drug users, as the authors had predicted. Furthermore, students who perceived their parents to be more authoritative were less likely to be drug users, whether they were American or Chinese. This finding is consistent with past research, which supports the idea that perceived authoritative parenting is related to higher academic performance and low substance use (Cohen & Rice, 1997). Pilgrim, et. al., (1999) also found that peer influence was a predictor of adolescent substance use across both cultures. With this information, prevention plans could be developed for each culture to use in schools. It would focus not only on resisting peer pressure, but how to fulfill certain needs without turning to drugs or alcohol. Even though there were similar results about substance use between both cultures, more research needs to be done to see if the results can be duplicated before a cross-cultural prevention plan can be developed.

Another important variable affecting adolescent substance use is parental supervision. The amount of supervision a parent gives a child can greatly affect a child's behaviors and fears of consequences. Chilcoat & Anthony (1996) surveyed 8 to 10 year-olds in a longitudinal study looking at the impact of parental monitoring (level of supervision) on initiation of drug use in adolescence. Results indicated that children in the lowest level of parental monitoring (e.g. permissive parenting styles) were at a higher risk of initiating substance use. These children were 2.8 times more likely to engage in substance use throughout adolescence than were the children in the highest level of

parental monitoring (e.g. authoritative parenting styles). Research also showed that a decrease in parental monitoring over the course of the study resulted in an increase in adolescent substance use. The authors stated “higher levels of parental supervision and monitoring in middle childhood appeared to be associated with a 2-year delay in onset of youthful drug-taking” (Chilcoat & Anthony, 1996, p. 96). Children who are closely monitored are at a decreased risk of substance use, so teaching parents how to effectively monitor their children might be a beneficial preventative measure.

Baumrind (1991) studied the influence of parenting style on adolescent competence and substance use. She reviewed previous research that examined data from the Family Socialization and Developmental Competence Project (FSP) to determine whether family patterns affected adolescent behavior and development. Parents and children were interviewed three times over a period of eleven years. The children were interviewed at ages four, nine, and fifteen. Baumrind’s analysis of the data focused on the relationship of family patterns to adolescent competence and family characteristics that could influence adolescent substance use. In other words, she examined the adolescent’s role within the family as well as specific characteristics or attributes that affected family structure (i.e., boundaries, communication, etc.).

Results indicated that children from authoritative families were found to be more competent, reported negative attitudes toward substance use, and used substances less than children from authoritarian families (Baumrind, 1991). Authoritarian parents were found to have more marital problems and a less satisfying relationship with their adolescent children. These children lacked autonomy and viewed their parents as restrictive yet respected their authority. They also had more drug use than those from

authoritative families but less drug use than those from permissive families did. The adolescents from permissive families were found to use illicit drugs more frequently, described their parents as non-restrictive and had low achievement despite their intelligence. As was predicted, the instances of substance use decreased as the adolescent's perception of their parents' restrictiveness and responsiveness increased.

There are several explanations to account for these results. A positive family environment that includes love, discipline, and autonomy will most likely be supportive enough to decrease an adolescent's risk of substance use. If the child feels that he/she has a purpose to serve in the family and knows and respects the consequences of their actions, they may be more apt to make responsible choices in their life. The family's ability to function effectively in a variety of settings (i.e., stressful situations or conflicts) can help to determine an adolescent's risk of substance use. For example, a family who spends free time together will most likely have a close relationship. Time spent together as a family may increase the bond between family members, which might decrease the risk of adolescent substance use.

A similar study (Stice, Barrera, & Chassin, 1993) examined the relationship of parental support and control with adolescents' externalizing symptomology and substance use. Parental support included characteristics such as guidance, intimacy, and reliability. Parental control included such characteristics as discipline and enforcement of rules. Externalizing symptomology refers to overt behaviors that are a reaction to an adolescent's thoughts or feelings. For example, drinking and staying out late are externalizing behaviors, whereas depression could be seen as an internalizing behavior. A sample of 485 children, ages 10-15, and their parents were surveyed. The researchers

wanted to determine how specific family relations affected adolescent problem behaviors. Results indicated that the joint effect of parental support and control was negatively correlated with adolescent substance use. As support and control increased, an adolescent's risk of substance use decreased. This effect was only significant when parental support and control were combined in the analysis. Parental support alone showed no significant relationship to substance use. Parental control is most likely seen as positive to an adolescent if their parents are warm, loving and very supportive. This combination may decrease an adolescent's risk for substance use because there are consequences to their actions, yet their parents are not demanding or overpowering. Instead, the parents show understanding, which may lessen the negative effect that control might have. Parental behaviors have an enormous influence on an adolescent's behaviors so it is important to examine the relationships between them.

Adolescent Behaviors, Internal and External Factors, and Adolescent Substance Use

There are many different adolescent characteristics that play a role in adolescent behavior. Internal factors, such as self-esteem and feelings of anger, may affect the choices an adolescent makes. Other influences may be considered external or outside of the adolescent's control (i.e. peer pressure). Peer pressure is likely to be an important factor in an adolescent's choice to use drugs or alcohol. In a study that looked at how ethnic and gender differences may affect adolescent substance use, peer pressure was used as a possible risk factor. Flannery, Vazsonyi, Torquatti & Fridrich (1994) surveyed 1170 6th and 7th graders that were equally divided by gender. The authors looked at several interpersonal as well as intrapersonal domains including parental monitoring (supervision) and parent-child involvement (closeness) to assess risk for adolescent

substance use. Each domain had a separate questionnaire to determine the adolescent's perception of each variable.

As the authors had predicted, the overall levels of substance use were not significantly different between the Caucasian and Hispanic ethnic groups (Flannery, et al., 1994). This finding is also supported by a similar study by Amey & Albrecht (1998), which found that there were no significant differences in levels of drug use between African Americans, Caucasians, and Latinos. Flannery, et al. (1994) also found that less monitoring from the parents was related to an adolescent's susceptibility to peer pressure. This susceptibility was highly related to substance use for both Caucasian and Hispanic males and females. The authors mentioned that peer pressure for 6th and 7th graders has a greater impact on substance use than any other predictor they examined. That is why it is important to study young adolescents. Children are susceptible to many influences at that age so it is important to see what other factors influence children their age. This information would be used to devise a plan to decrease the risks of adolescent substance use.

Since there was no difference between either groups, prevention plans aimed at resisting peer pressure can be developed that would target both groups. This is beneficial because it allows one program to cover a wider section of adolescents. No matter what ethnicity, it seems that peer pressure affects children in similar ways. Since peer pressure is a big influence on substance use, it is important to teach children how to avoid succumbing to peer pressure.

McNeal and Hansen (1999) surveyed students in sixth through ninth grades for four consecutive school years looking at developmental patterns associated with the onset

of drug use, specifically changes in mediators during adolescence. The mediators examined included beliefs about consequences, decision-making skills, goal setting skills, self-esteem, stress management skills, social and life skills, perceived alternatives to drug use, assistance skills, resistance skills, the incongruence between values and substance use, manifestations of a commitment to not use substances, and normative beliefs. Three sets of the eighth grade cohorts were surveyed again in the ninth grade. The researchers were examining the degree to which there were significant differences in key mediators between initiators and continuing non-users at specific times. Initiators were considered to be those students who had begun experimenting with drugs or alcohol prior to the study. Key mediators like self-esteem were measured to determine the lowest level an adolescent could possess and still maintain a drug free lifestyle.

The results showed that deterioration of specific mediators like self-esteem, beliefs about consequences, and decision-making skills were evident prior the onset of adolescent substance use. The researchers argued that targeting these mediators early in adolescence could provide an effective intervention for adolescent substance use. They also discovered that early adolescence has to become a target for prevention since it seems that drug use is starting at an earlier age than researchers had previously thought.

Another characteristic related to self-esteem that has been researched as a predictor of adolescent substance use is shyness. Page (1989) examined how shy individuals might have problems in social interactions, feel uncomfortable around others and show several inhibitions when in group situations. He hypothesized that shy adolescents would be more likely to use drugs or alcohol to reduce their inhibitions, thereby allowing them to feel more comfortable in social situations. Page surveyed 1,297

high school students and found that shy adolescents were more likely than non-shy adolescents to have used some type of substance within the past month. This finding was more significant for male adolescents. That is, shy males were more likely to use illicit drugs (cocaine, marijuana) to cope with their social discomfort. Shy individuals may also seek friends who are less critical and more accepting. "Social groups which tend to use illicit substances may provide a more comfortable and less inhibiting social atmosphere" (Page, 1999, p. 433). Page also stated that shy adolescents are more susceptible to peer pressure in the hopes that they will fit in. In a related study, Pluddemann, Theron, & Steel (1999) found that females with low self-consciousness were more likely to drink. Like shy individuals, they may need to be reassured about their appearance and turn to alcohol to fit in or cope with the pressure of trying to fit in. Page (1989) concluded that to counter this likelihood, intervention strategies need to target younger-aged children and work on social skills training and self-esteem boosters.

Summary

In sum, research has clearly shown that family characteristics play an important role in shaping an adolescent's personality and lifestyle. Every family characteristic has differing effects on the adolescent and the choices he/she makes. Parental behaviors also play a major role in adolescent development and attitudes toward substance use (Stice, et. al., 1993). Overall, the research found several family characteristics that can lead to an increased risk of adolescent substance use, including a lack of parental supervision, a lack of family bonding and parental substance use. Additionally, research shows that internal factors within the adolescent also have an impact on adolescent substance use. For example, low self-esteem may increase an adolescent's risk of substance use.

Present Study

The aim of this study was to examine variables related to substance use in young adolescents (seventh and eighth grade), as little research has been done using middle school students as participants. Studying younger adolescents is beneficial because substance use is beginning at younger ages (McNeal & Hansen, 1999). Therefore, it is important to examine the factors that put young adolescents at risk of substance use. The research discussed above identifies specific variables that could be predictors of adolescent substance use, e.g., parental supervision, family bonding, and self-esteem. The aim of the present study was to determine which variable or combination of these variables is the best predictor of adolescent substance use. The specific variables chosen for this study were perceived parenting style, adolescent family life satisfaction, and self-esteem. These variables cover both family factors and adolescent characteristics that may affect adolescent substance use. This study adds to the existing body of literature in that it focuses on the relationship between self-esteem, family life satisfaction, perceived parenting style, and substance use among junior high school age students.

Identifying specific predictors of adolescent substance use in a middle school population would be helpful in designing more effective preventative measures for children at younger ages. By determining the best predictor out of the variables in this study, one could design intervention strategies directly targeted at improving that area in the adolescent's life. There may also be a combination of variables that best predict adolescent substance use. In other words, it is unlikely that a single variable is responsible for an adolescent's behavior. A specific combination of variables may put

adolescents at higher risk of substance use, so targeting this combination may work better than just focusing on a single variable.

Based on previous research, several hypotheses were generated. Of the three predictor variables (perceived parenting style, adolescent family life satisfaction, and self-esteem), it was hypothesized that perceived parenting style would be the best predictor of adolescent substance use. It is possible that how an adolescent views their life situation and their parent's involvement will determine the decisions they make. If they feel their parents are strict, adolescents may be less likely to engage in deviant behavior to avoid problems with their parents. However, if adolescents feel their parents are not involved in their lives they may make poor choices and be more rebellious. Therefore, it was predicted that the authoritative parenting style and high family life satisfaction would be correlated with little or no substance use. Furthermore, it was also predicted based on previous research that low self-esteem would be predictive of increased substance use.

Method

Participants

Participants were recruited from a middle school in central Illinois after gaining permission from school administrators and parents. They included students in both seventh and eighth grades who were 12 - 14 years of age. A total of 87 students participated in the study. Demographic information was obtained for the participants. There were 39 males and 48 females who participated in the study. There were approximately equal numbers of seventh graders ($N = 41$) and eighth graders ($N = 46$). The majority of the group was White/Caucasian ($N = 83$). Other ethnic groups included

Native American ($N = 3$) and Islamic ($N = 1$). Sixty-two percent of the students' parents were still married, while 27% of the students were from divorced homes. The remaining students' parents were either separated ($N = 2$) or never married ($N = 5$)

Materials

Four questionnaires were administered to assess self-esteem, family life satisfaction, parenting styles of mother and father, and substance use. Self-Esteem (see Appendix A1) was measured using a scale developed by Rosenberg (1965), which consists of 10 questions. Some examples include "I feel I do not have much to be proud of" and "I take a positive attitude toward myself." Response options range from strongly agree (1) to strongly disagree (4). The internal consistency reliability on this scale is .88 (Rosenberg, 1965).

The Adolescent Family Life Satisfaction Index (see Appendix A2) is a 13-item Likert-type scale and was developed to measure adolescent reports of satisfaction in their relationships with parents and siblings (Henry, Lovelace, & Ostrander, 1992). Sample items include: "I am satisfied with the amount of freedom my parent(s) give me to make my own choices" and "I am satisfied with my overall relationship with my brother(s) and/or sister(s)". Responses are given on a Likert-type scale ranging from strongly disagree (1) to strongly agree (5) (Stephenson, et. al., 1996). An internal consistency reliability coefficient of .90 has been established for this scale (Henry, et. al., 1992). Scores were summed for three subscales: parent, sibling and total. Participants without siblings were not given a total satisfaction score and were not used in analyses involving total family life satisfaction.

The Parental Authority Questionnaire (see Appendix A3) was developed to determine the adolescent's perception of parenting style based on Baumrind's descriptions of authoritative, authoritarian, and permissive parenting styles (Buri, 1991). There are 30 identical questions each to be answered regarding the adolescent's relationship with their mother and father. Each parenting style is measured using a set of ten questions. Some examples include: "My mother/father consistently gives me direction and guidance in rational and objective ways" and "My father/mother gets very upset if I try to disagree with him/her." Responses are given on a Likert-type scale with responses ranging from strongly disagree (1) to strongly agree (5). Internal consistency reliability coefficients for each of the six PAQ scales have been found to be .75 for mother's permissiveness, .85 for mother's authoritarianism, .82 for mother's authoritativeness, .74 for father's permissiveness, .87 for father's authoritarianism, and .85 for father's authoritativeness (Buri, 1991).

The substance use survey (see Appendix A4) was taken from a study done by Western Michigan University. The Michigan Alcohol and Other Drugs School Survey (Van Valey, 1995) consists of questions regarding how much of a specific substance the adolescent has used in his/her lifetime. Responses are coded on a Likert-type scale ranging from (1) Never to (7) 40+ times. The substances assessed include alcohol, tobacco, inhalants, marijuana, hallucinogens, cocaine/crack, and amphetamines. Internal consistency reliability coefficients of .89 for cigarette use, .81 for alcohol use, .85 for marijuana use, and .71 for use of illicit drugs other than marijuana have been established for this survey (O'Malley, Bachman, & Johnston, 1983).

A questionnaire was also administered to obtain demographic data such as gender, ethnicity, grade level, and age (see Appendix B). Other information such as parents' marital status was included. If the parents were divorced, information was obtained as to which parent the child lives with and whether the parents remarried. Previous research has determined that adolescents in stepfamilies report greater amounts of substance use than adolescents in intact families (Jenkins & Zunguze, 1998).

It was emphasized that all questionnaires would be anonymous and parents or teachers would not have access to responses. The predictors were measured according to the participants' answers on the different questionnaires. All of the answers have specified point values, which were summed for each questionnaire and any relevant subscales.

Procedure

A parental permission form was sent home with all of the potential participants (see Appendix C). Only those students with signed permission slips were allowed to complete the survey. Thirteen students did not have permission to participate and were allowed to work on homework or read while the other students completed the survey. Students who agreed to participate completed the questionnaires during their designated class time. Each participant also completed an informed consent form (see Appendix D). The survey had a total of 104 questions and several additional demographic questions, which took approximately 30 to 40 minutes for the students to complete. Students were also given a debriefing statement when they completed the survey, which included a reference list for further information regarding substance use (see Appendix E).

Results

Missing Data

Several of the students had missing answers for one or more of the outcome measures. Two subjects were missing data on one or two of the variables that made up a scale score, so the missing values were estimated by taking the mean of the remaining variables for that measure. Several students did not complete a full section of the PAQ because they had no contact with the parent specified. That data was left missing and those subjects were not used in the analyses of that specific scale. One subject was excluded from the study altogether for several pages of missing data.

Qualitative Analysis

Drug Usage

Any Drug Use. The number of students reporting any level of drug use was high. Of the 87 participants, 67% reported trying a substance, including tobacco and alcohol, at least once in their life. Scores on the MAODSS ranged from 20 to 59 (with 20 being the lowest score possible and 127 being the highest score possible).

Tobacco Use. More than half of the participants (58%) reported never having smoked, while 42% acknowledged smoking on more than one occasion. Of these, 30% reported smoking on a regular basis, either now or in the past. When looking at the individuals who reported tobacco use, 74% smoke five or fewer cigarettes per day while 26% smoke about half a pack or more per day.

Alcohol Use. More than half of the participants (55%) reported some level of alcohol use. Of these participants, 33% drank alcohol on 10 or more occasions. Additionally, 27% of alcohol-using students reported having drunk five or more drinks in

a row some time in the two weeks prior to completing the survey. These statistics may indicate possible problematic drinking behavior among 15-18% of the participants.

Other Drug Use. Marijuana, inhalants and amphetamines were the drugs used most often, besides alcohol and tobacco, in this sample. Thirteen percent of participants reported having used marijuana. Of those, 45% indicated having smoked marijuana 10 or more times. Furthermore, 15% of the subjects surveyed reported some level of amphetamine use and 32% reported some level of inhalant use. Of these students, approximately 29% ($N = 8$) reported inhalant use on 10 or more occasions.

Subgroup Differences

Although, in the overall sample, males and females had fairly equivalent total drug use scores ($M_{\text{males}} = 28.28$, $SD_{\text{males}} = 9.45$; $M_{\text{females}} = 25.58$, $SD_{\text{females}} = 8.92$), gender differences were found for specific substances. The results of a t -test indicated that differences in reported drug use between males and females were significant for tobacco use, inhalant use and marijuana use (see Table 1). Specifically, tobacco and inhalant use were significantly higher for males, while marijuana use was significantly higher for females.

A series of ANOVAs were conducted to assess the relationship between three other demographic variables and overall substance use. The independent variables were age, grade in school and parents' marital status with the dependent variable being participants' total scores on MAODSS. There was a significant main effect for substance use and parents' marital status, $F(3,81) = 4.75$, $p < .01$ (see Table 2). Results of a Tukey's post-hoc test indicated that adolescents from intact families were less likely to engage in drug use ($M = 24.11$) than those from divorced families ($M = 31.17$). There

were no significant differences found in substance use when examining subject age and grade in school.

Finally, a series of ANOVAs were conducted to assess the relationship between parents' marital status and adolescent substance use. The independent variables were the marital status of the parents (i.e., married, divorced, never married and separated) with the dependent variables being total substance use, tobacco use, alcohol use, marijuana use, inhalant use, and amphetamine use. The analysis for total substance use revealed a significant main effect for parents' marital status, $F(3, 81) = 4.749, p < .01$. A Tukey's post-hoc test indicated that adolescents from intact families were less likely to engage in substance use ($M = 24.11$) than those from divorced families ($M = 31.17$), $p < .01$. Additionally, the tobacco use analysis revealed a significant main effect for parents' marital status, $F(3, 81) = 4.470, p < .01$. A Tukey's post-hoc test indicated that adolescents from intact families were less likely to engage in tobacco use ($M = 5.07$) than those from divorced families ($M = 7.54$), $p < .01$. The analysis for alcohol use also showed a significant main effect for parents' marital status, $F(3, 81) = 2.897, p < .05$. A Tukey's post-hoc test indicated that adolescents from intact families were less likely to engage in alcohol use ($M = 5.96$) than those from divorced families ($M = 8.13$), $p < .05$. The marijuana use analysis also revealed a significant main effect for parents' marital status, $F(3, 81) = 3.804, p < .05$. A Tukey's post-hoc test indicated that adolescents from intact families were less likely to engage in marijuana use ($M = 1.11$) than those from divorced families ($M = 2.08$), $p < .01$. Finally, the inhalant use analysis approached significance, $F(3, 81) = 2.695, p = .051$, while the amphetamine analysis failed to reveal a significant main effect for parents' marital status, $F(3, 81) = 1.674, p = .179$.

Predictor Variables

RSES. Scores on the RSES ranged from 17 to 40 ($M = 29.26$, $SD = 5.00$), with higher scores representing higher self-esteem. The mean score was within the range of average self-esteem, which means most students in the study had a fairly positive feeling about themselves.

AFLSI. Scores on the AFLSI parent subscale ranged from 7 to 35 ($M = 24.29$, $SD = 6.66$), with higher scores representing greater satisfaction in the parent/adolescent relationship. The mean score indicates that the participants were fairly satisfied with the relationships they have with their parents, which is consistent with previous research using this subscale. Henry, Lovelace, and Ostrander (1992) found a mean score of 24.8 for the parent subscale in their study. Scores on the AFLSI sibling subscale ranged from 6 to 30 ($M = 20.29$, $SD = 5.84$), with higher scores indicating greater satisfaction with sibling relationships. The mean score shows that most students were satisfied with their sibling relationships, which is also consistent with previous findings. In their study, Henry, et. al. (1992) found a mean score of 21.4 for the sibling subscale.

PAQ Subscales. The PAQ consisted of three mother subscales and three father subscales to assess authoritarian, authoritative, and permissive dimensions of parenting. The possible range of scores for each subscale is 10 to 50. Scores on the authoritarian subscale ranged from 16 to 50 ($M = 32.55$, $SD = 6.87$) for the mother and from 18 to 50 ($M = 33.69$, $SD = 7.57$) for the father. Scores on the authoritative subscale ranged from 17 to 48 ($M = 34.57$, $SD = 6.87$) for the mother and from 11 to 46 ($M = 32.41$, $SD = 7.53$) for the father. Scores on the permissive subscale ranged from 13 to 42 ($M = 25.99$, $SD = 6.08$) for the mother and from 16 to 41 ($M = 26.71$, $SD = 5.79$) for the father. "The

higher the score, the greater the appraised level of the parental authority prototype measured” (Buri, 1991, p. 112). Each mean score was higher and varied less than scores from a previous study using the PAQ (Buri, 1991). However, Buri (1991) surveyed juniors and seniors in high school, which may explain the differences in mean scores. Also, a number of surveys did not have the PAQ completed for one parent and were not included in the total analysis of parenting style.

Predictors of Substance Use

Adolescent substance use may be related to a number of factors. How do self-esteem, family life satisfaction, and perceived parenting style correlate with adolescent substance use? To answer this question, correlation matrices were first generated examining (1) the correlation between questionnaire total scores and their subscale scores (see Tables 3.1 – 3.3) and (2) the inter-correlation between all the variables in the study. Most of the questionnaire total scores were found to be highly correlated with their subscales, as were the subscale scores with each other. This finding is consistent with previous research (Buri, 1991; Gray-Little, Williams, & Hancock, 1997; Henry, Lovelace, & Ostrander, 1992). Additionally, it was found that self-esteem was significantly correlated with multiple predictor and outcome variables (see Table 3.4). Self-esteem being correlated with the AFLI and PAQ scales lends validity to their use in this study as other studies have also noted a correlation between self-esteem and these measures (Buri, 1991). Self-esteem was significantly negatively correlated with substance use ($r = -.303, p < .05$). Finally, scores on the permissive mother and authoritarian father subscales were significantly related to use of specific drugs. Specifically, the permissive mother subscale was correlated with alcohol use ($r = .291, p$

< .01) and authoritarian father was correlated with alcohol use ($r = .346$, $p < .01$), other drug use ($r = .314$, $p < .01$) and total drug use ($r = .350$, $p < .01$).

A major question of importance is whether certain variables are predictive of adolescent substance use. To address this question, first, a hierarchical multiple regression analysis was conducted with the following predictor variables: the RSES score, the PAQ subscale scores for both the mother and father, and the AFLSI-parent and sibling scores (see Table 4). The Family Life Satisfaction-Total score was not included because several participants ($N = 5$) reported having no siblings. The criterion variable was total drug use. The regression equation, with all of the variables listed above, was not found to be significant, $R^2 = .229$, $\Delta R^2 = .105$, $F(9,60) = 1.985$, $p = .057$.

A series of backward regression analyses were then conducted with specific selected predictor variables. Only a few of the original scales were used for the backward regression analyses, as the main purpose of this study was to identify strong predictors of adolescent substance use. The predictor variables selected for the backward regression analyses were the RSES score, the AFLSI-Parent subscale score, and scores from the permissive mother and authoritarian father subscales of the PAQ. These variables were selected based upon the results of the correlation matrices. The criterion variables in these analyses were total substance use, tobacco use, or alcohol use. The selected probability of F to remove was set at $\geq .10$. Following is a discussion of the results for each criterion variable.

Total Drug Use. The authoritarian father subscale was found to be a significant univariate predictor of total drug use, $R^2 = .158$, $\Delta R^2 = -.010$, $F(2,71) = 6.645$, $p < .01$ (see Table 7). Specifically, having a father who is perceived as strict and unloving

increases the likelihood of overall substance use. There were no other significant main effects.

Tobacco Use. The authoritarian father subscale of the PAQ was also found to be a significant univariate predictor, $R^2 = .054$, $\Delta R^2 = -.028$, $F(1,72) = 4.142$, $p < 0.05$ (see Table 5) such that subjects having a father who is strict and detached were more likely to report tobacco use. There were no other significant main effects.

Alcohol Use. The authoritarian father subscale of the PAQ was also a significant predictor of alcohol use, $R^2 = .206$, $\Delta R^2 = -.003$, $F(3,70) = 6.036$, $p < 0.01$, as was self-esteem, $p < .05$ (see Table 6). Specifically, subjects having low self-esteem and those who perceive their fathers as strict and lacking in warmth were more likely to use alcohol. No other significant main effects were found.

Marijuana, Amphetamine, and Inhalant Use

A correlation matrix was conducted on three other types of drugs: marijuana, amphetamines, and inhalants. With the exception of tobacco and alcohol use, participants reported use of these three drugs most often ($N_{\text{marijuana}} = 11$, $N_{\text{amphetamines}} = 13$, $N_{\text{inhalants}} = 28$). Marijuana use was found to be significantly negatively correlated with self-esteem, $r = -.229$, $p < .05$. That is, lower self-esteem was correlated with greater marijuana use, as defined by the number of occasions of use (see item 9 of MAODSS, Appendix A4). There was also a significant negative correlation between self-esteem and amphetamine use, $r = -.236$, $p < .05$. Specifically, lower self-esteem was correlated with higher amphetamine use, as defined by the number of occasions of use (see item 14 of MAODSS, Appendix A4). There was also a negative, though not significant, correlation

between self-esteem and inhalant use $r = -.174$, $p = .107$ (see item 19 of MAODSS, Appendix A4).

Discussion

This study was conducted to determine whether self-esteem, adolescent family life satisfaction, and perceived parenting style were predictors of adolescent substance use among junior high school students. In this section will be a discussion of the findings regarding predictors of substance use, the supplemental findings on specific drug use, and the qualitative findings of the sample. Implications of the findings and directions for future research and prevention programs will also be explored.

Predictors of Substance Use

Parenting style was one predictor variable of interest in this study. Based on previous research (Pilgrim, Luo & Urberg, 1999), it was hypothesized that adolescents who perceived their parents as authoritative would be less likely to use substances. Although authoritative parenting was somewhat correlated with less substance use, it was not found to be a significant predictor. Additionally, although having a permissive mother was significantly correlated with adolescent alcohol use, this too was not found to be a predictor of overall substance use. However, the authoritarian father parenting style was found to be a significant predictor of tobacco use, alcohol use and total substance use. That is, adolescents who perceived their fathers as strict and unloving were more likely to use drugs. Previous research (Baumrind, 1991) supports this finding regarding authoritarian fathers. Authoritarian parents have been found to have less satisfying relationships with their children, and children with authoritarian parents reported more drug use than children with authoritative parents (Baumrind, 1991). Authoritarian

parents tend to lack warmth, are highly directive, and attempt to control their child's behavior, which paradoxically has been associated with greater substance use (Buri, 1991). The lack of significant findings related to the mother parenting types is also consistent with previous research. Johnson & Pandina (1991) found that a father's lack of warmth was predictive of substance use for both males and females. It is unclear from the research data what the reason may be for this finding.

Why might authoritarianism in a father be predictive of substance use? It may be that in order to fulfill a need that is not being met (father's love), the adolescent may turn to drugs or alcohol for gratification (Pilgrim, et. al., 1999). The adolescent may also turn to peer approval or acceptance to fulfill the void of their father's love, which may in turn lead to substance use if their peers use drugs. Research has also shown that children need mutual attachment with their parents, which tends to decrease the risk of substance use (Brook, Cohen & Jaeger, 1998). This attachment may be missing in the relationship between an authoritarian father and his child, possibly explaining the higher reports of substance use.

Another reason for this difference in findings regarding perceived parenting style could be the age group sampled. Younger adolescents may respond to their parents differently than older adolescents. At this younger age, adolescents may be starting to test their parent's boundaries. They may see their parent's rules as controlling and unloving, whereas, older adolescents may begin to understand why the boundaries were set and not see them as a measure of parental control. The previous statement is especially true if the parents provide nurturance and attempt to avoid conflict as much as possible during childhood (Santrock, 1998). Therefore, the parenting style as seen by

older adolescents may tend to be more authoritative, as past research has found (Pligrim, Luo, & Urberg, 1999).

The second hypothesis, based on research by McNeal and Hansen (1999), was that having low self-esteem would lead to greater substance use. In fact, self-esteem was found to be a significant predictor for alcohol use, with subjects having lower self-esteem being more likely to use alcohol. Although self-esteem was not found to be a predictor of total substance use, it was significantly negatively correlated with tobacco use, alcohol use, amphetamine use, marijuana use and total substance use. Research has shown (Page, 1989) that preadolescents (younger children) may be more susceptible to peer pressure. Since alcohol may be more accessible to younger adolescents than other drugs, the presence of peer pressure may be more prominent for using alcohol. Even though self-esteem was not a significant predictor of total substance use, the fact that low self-esteem was correlated with use of specific substances warrants further study of this variable in future research, and continued inclusion of self-esteem enhancement as a component of substance use prevention programs.

Based on research by Stephenson, Henry & Robinson (1996), the last hypothesis was that having low satisfaction with family life would increase the chances of substance use. Family life satisfaction was not found to be a significant predictor of substance use in this study. There are several reasons why these results may have been inconsistent with previous research. For one, the subjects in the previous study were high school students. A child's view of their family may change as they get older and become more autonomous. Also, there are many factors in an adolescent's family life that would determine whether or not it was satisfying. Positive family life satisfaction may be

related to lower substance use, but since it encompasses so many things, family life may not be strong enough on its own to be a predictor. For example, a child may not be satisfied with his/her family life, but still have parents who are actively involved in their life. This involvement may lead to a reduced risk of substance use, regardless of how the adolescent views his/her family life.

Patterns of Substance Use

Substance use in junior high school should be of major concern, as early substance use has been linked to long-term developmental disruptions and poor school performance (Weinberg, Rahdert, & Colliver, 1998). Substance use among younger adolescents is also increasing (McNeal & Hansen, 1999). In the present study 67% of those surveyed reported some level of substance use. Forty-two percent of the participants acknowledged smoking at least once in their life, with 26% of these subjects smoking about half a pack of cigarettes or more each day. Fifty-five percent of the participants reported some level of alcohol use. Of great concern is that about one-third of the alcohol-using subjects acknowledged possible problematic drinking behavior (i.e., drinking alcohol on 10 or more occasions and having five or more drinks in a row during the two weeks prior to the study). Besides alcohol and tobacco, there was significant use of other drugs. Thirteen percent of the students reported marijuana use, 15% amphetamine use, and 32% inhalant use. There were gender differences in use of these substances. Tobacco and inhalant use was significantly higher for males, while marijuana use was significantly higher for females. Previous research indicated that males are more likely than females to engage in substance use (Anderson & Henry, 1994). Kosterman, Hawkins, & Guo (2000) also found that males were more likely than

females to use marijuana. A possible reason for the present finding that female marijuana use was higher is that the males may be moving away from using marijuana and experimenting with the newer, more “trendy” drugs (e.g., inhalants).

This study showed the popularity of drinking among young adolescents, with about 13% of alcohol-using participants reporting possible problem drinking behaviors. Binge drinking has become more popular among teenagers, and the risks of drinking have become increasingly harmful, especially now that drinking is related to neurological damage (Ballie, 2001). Research shows that alcohol dependent teens show impaired memory and verbal skill deficits, which could lead to problems in school, as well as long-term damage caused by excessive drinking (Ballie, 2001).

There seems to be trends in drug use that change with the passing years (Santrock, 1998). While looking at the responses of the surveys, one drug besides tobacco and alcohol seemed to stand out. Inhalant use was reported by 32% of the participants in this study, which is higher than the 21% of eighth graders who reported using inhalants in an earlier study (Mackesy-Amiti & Fendrich, 2000). Scheller (2000) outlined the risks associated with use of inhalants. Inhalants including gasoline, air fresheners, lighter fluid and glue are very dangerous types of drugs that can cause stomach problems, loss of appetite and kidney failure. Inhalants also destroy brain cells at a fast rate by replacing the oxygen in the blood, which in turn can lead to brain damage and even death by asphyxiation. Many children do not know of the drastic effects inhalants have on their bodies, and may also believe that sniffing inhalants only a couple of times will not hurt them. This is a dangerous misperception as “sniffing inhalants even one time can be deadly, but repeated use can cause a slower, more gruesome death” (Scheller, 2000, p.

17). Inhalant use, or “huffing”, seems to be a trend that is growing in popularity and intervention is necessary, especially since children have easy access to household items used as inhalants, such as nail polish remover, spray paint, and hair spray (Mackesy-Amiti & Fendrich, 2000). Schools should include this topic in their drug prevention curriculum and parents need to be educated on inhalants and their affects.

Impact of Parents’ Marital Status

Demographic data involving home life was collected to see if it had any effects on substance use. Results indicated that parents’ marital status appeared to impact adolescent substance use. The findings show that children from divorced homes were more likely to use drugs or alcohol than children from intact homes. Since children from divorced homes appear to be more susceptible to drug use, parents need to help their children adjust to the divorce and new living environment. It has been shown that if children are comfortable with their environment and tension between the parents is minimal (regardless of parents’ marital status), then the likelihood of substance use decreases (Stephenson, Henry & Robinson, 1996). Parenting groups targeting these at-risk families would be helpful in teaching divorced parents how to properly handle their new living situation, as well as teaching adolescents/children from these homes healthy coping skills.

Summary of Findings

When examining self-esteem, adolescent family life satisfaction, and perceived parenting style, it was found that the authoritarian father parenting style was the best predictor of total adolescent substance use and, more specifically, tobacco use. Self-esteem and the authoritarian father parenting style were found to be the best predictors of

adolescent alcohol use. Furthermore, the authoritarian father parenting style was significantly correlated with alcohol use, other drug use and total drug use. Lastly, self-esteem was found to be significantly negatively correlated with total substance use, tobacco use, alcohol use, marijuana use, and amphetamine use.

Subjects in this study reported wide use of drugs, including alcohol, tobacco, marijuana, amphetamines, and inhalants. There were significant differences between male and female students' use of substances. Males were more likely to use tobacco and inhalants, while females were more likely to use marijuana. A significant effect of parents' marital status and substance use was also found. Specifically, adolescents from intact homes were less likely to engage in tobacco use, alcohol use, marijuana use, and overall substance use than were adolescents from divorced homes.

Criticisms

Several results from past research studies were not replicated in this study, specifically the authoritative parenting style and family life satisfaction were not found to be predictors of total adolescent substance use. There are several possible reasons to explain these discrepancies. First, the sample size for the PAQ variable was reduced because there were a number of children who reported not knowing at least one of their parents, specifically their fathers. These children were not included in the analysis of the parenting style index, which greatly decreased the total number of subjects for that analysis. Further analyses could be done to determine if this sample of children who do not have a relationship with one of their parents differs from those who have a relationship with both parents. Second, those children without siblings could not be

included in the total family life satisfaction index, which reduced the number of subjects for that analysis as well.

Another factor that may have affected the results was sample size. When recruiting for subjects, school districts seemed reluctant to allow their students to participate in a study about substance use. Although such research would help in developing prevention programs, the school districts contacted for this study declined to participate after they were informed of the intended age of the participants. Perhaps by presenting the school with current statistics on adolescent substance use, it would have been easier to emphasize the importance of collecting data to assess the needs of their school. Also, by explaining the importance of developing more personalized prevention programs, schools may be more likely to agree to participate. Having more than one school participate may have lead to more significant findings by increasing the number of participants, as well as creating a more geographically and ethnically diverse sample.

Additionally, there were more questions involving substance use that could have been asked, but due to time restrictions from the school, the survey had to be shortened. Further information regarding patterns of drug use such as age of initial use, amount initially used, and amount used currently would have been helpful. It would also be important to find out whether and with whom the adolescent uses drugs (i.e., alone versus with friends, siblings, or relatives). This additional information may be used to outline a comprehensive prevention program and assess the need for intervention or treatment among those surveyed.

Implications of Findings

Directions for Future Research. There are several possible directions for future research in this area. For one, research could explore further whether there is an “ideal” parenting style or mother-father match. In other words, what is the effect of the relationship between a mother’s parenting style and father’s parenting style on adolescent substance use? Is there a specific match of parenting styles that would decrease the risk of substance use? Information regarding “ideal” parenting style matches may be used in parenting classes to teach parents how to work together effectively as a parenting team.

Additionally, knowing the child’s exposure and/or access to drugs or alcohol would also be important. For example, finding out if their parents or siblings use may be beneficial in providing an explanation for substance use in young adolescents. In the future, a survey could be developed that involves several sections being administered at different times in order to get all the necessary and important information about the participants.

Furthermore, young adolescents do not have equal access to drugs or alcohol so those with the greatest opportunity would be more likely to use drugs. At this young age, children may not know how or where to get drugs or alcohol, but if given the opportunity may choose to use them. There was a correlation, though not significant, between positive sibling satisfaction and greater alcohol use ($r = .011$). It would be interesting to see if those children who used alcohol had siblings who also used alcohol. Knowing more information about the child’s parents and siblings may be very helpful in explaining adolescent substance use.

Finally, it may be important to gather information regarding elements of school and home environments including peer pressure, parent-child communication, and friendships. Adding these variables might allow researchers to better understand the relationship between self-esteem, familial variables, and adolescent substance use.

Prevention and Treatment Programs. Past research has determined that self-esteem, adolescent family life satisfaction, and perceived parenting style are predictors of substance use in high school students, though few studies have looked at junior high students and substance use, as did this study. This study validates the link between self-esteem, parenting, and substance use. Targeting these specific areas in prevention programs may be helpful in reducing the number of younger adolescents using substances.

Consistent with past research, this study has found self-esteem to be a predictor of substance use. Although it has already become a focus of some treatment programs around the country, it should also be integrated into the prevention programs developed for the schools. Schools could incorporate peer groups and self-esteem enhancement programs into their curriculum. The addition of these programs may help to increase adolescent self-esteem, which in turn may decrease substance use. While targeting self-esteem in school will be beneficial, reaching out to parents could be another important prevention technique for schools to consider.

Based upon the findings in this study, parental involvement would be beneficial in the prevention and treatment of substance use in young adolescents. Since this study found the authoritarian father to be a predictor of substance use, it would make sense to take a family oriented approach in treatment by teaching parents how their parenting

styles may be affecting their child's behavior. With the knowledge gained about family characteristics involved in predicting substance use, treatment developers can begin incorporating family therapy into their programs.

Since parenting style is a predictor of substance use, classes and workshops on effective parenting skills should be offered to parents teaching them that strictness coupled with supportiveness decreases the risk of adolescent substance use. Parents need to talk effectively with their children about the effects of drugs and alcohol, especially since parenting style seems to affect the younger children the most (Chilcoat & Anthony, 1996). Being a loving, supportive, yet firm and directive parent has been found to be a factor associated with less substance use (Baumrind, 1991). Another topic that would be beneficial to discuss in parenting groups could be current trends in drug use and how to educate their children on the risks of using these types of drugs. Education at home should also be coupled with prevention and education at all grade levels in school. If parents are reinforcing what is being taught in school about drug use, than children may respond more positively to the school's program.

School prevention programs targeting alcohol, tobacco, marijuana, inhalant and other drug use could get parents involved by having a monthly meeting with the parents to discuss their child's progress in the program. These meetings could also inform parents about what they can do at home to reinforce what is being taught at school. If the school and the parents were working together on education and prevention, than maybe there would be a decrease in the number of adolescents initiating substance use.

One important topic that should be discussed in school and with parents is the effects of binge drinking on the body. Binge drinking is no longer a college phenomena.

This type of behavior has become popular among junior high and high school students. Parents and students need to be aware of problems associated with binge drinking. Prevention programs need to be implemented in schools beginning at an early age in order to educate children on the effects of drugs before the curiosity about experimenting with drugs begins. Educating students about these risks may be beneficial in keeping them involved successfully in school.

Education may be the key factor, but as this study indicates a negative self-concept and rigid, cold parenting may result in adolescent substance use irrespective of the adolescent's knowledge of the risks. Parents need to be actively involved in their children's lives, but it appears important that parents also be warm, loving and nurturing. Also, self-esteem needs to be nurtured since a negative self-concept is related to substance use. There are many factors that affect adolescent drug use and this study sheds light on the impact of a few of these. For the time being, it is important to improve upon and implement drug and alcohol education for every age group. Findings from this and other research studies should be used to develop more successful drug prevention programs with the cooperation of legislators, teachers, parents, and the students themselves. Children are our future, so we need to do all that we can to find better ways to educate them in order to keep them safe. Only then can we effectively decrease adolescent substance use.

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Table 1

Mean Scores of Drug Use By Gender

Measure	Males			Females		
	n	M	SD	n	M	SD
Alcohol Use	39	7.08	3.61	48	6.46	3.18
Tobacco Use**	39	7.23	4.26	48	5.13	2.03
Inhalant Use**	39	2.10	1.76	48	1.50	1.13
Marijuana Use*	39	1.23	0.78	48	1.54	1.53
Total Drug Use	39	28.28	9.45	48	25.58	8.92

Note. t-test comparison between groups: * $p < .05$. ** $p < .01$.

Table 2

Mean Scores of Drug Use By Parents' Marital Status

Measure	Alcohol Use			Tobacco Use			Total Drug Use		
	n	M	SD	n	M	SD	n	M	SD
Married	54	5.96	2.56	54	5.07	1.75	54	24.11	5.72
Divorced	24	8.13	4.43	24	7.54	4.50	24	31.17	12.27
Separated	2	9.50	6.36	2	7.00	4.24	2	36.50	21.92
Never Married	5	6.60	2.97	5	8.20	5.85	5	28.20	8.04

Note. Tukey's post-hoc tests showed a significant difference between drug use in married households and divorced households, $p < .05$.

Table 3.1

Intercorrelations Between Subscales for Adolescent Family Life Satisfaction (AFLS)

Subscale	1	2	3
1. AFLS-Parent	--	.299*	.831*
2. AFLS-Sibling		--	.778*
3. AFLS-Total			--

* $p < .05$ (2-tailed)

Table 3.2

Intercorrelations Between Subscales for Drug Use

Subscale	1	2	3	4	5
1. Tobacco Use	--	.642*	.536*	.480*	.809*
2. Alcohol Use		--	.499*	.704*	.903*
3. Inhalant Use			--	.659*	.664*
4. Other Drug Use				--	.865*
5. Total Drug Use					--

* $p < .05$ (2-tailed)

Table 3.3

Intercorrelations Between Subscales for Perceived Parenting Style

Subscale	1	2	3	4	5	6
1. Authoritarian Mother	--	-.004	-.161	.439*	.293*	.249*
2. Authoritative Mother		--	.360*	.132	.373*	.126
3. Permissive Mother			--	.169	.292*	.496*
4. Authoritarian Father				--	-.105	-.108
5. Authoritative Father					--	.559*
6. Permissive Father						--

* $p < .05$ (2-tailed)

Table 3.4

Intercorrelations Between All Subscales and Self-Esteem

Subscale	Self-Esteem
AFLS-Parent	.444*
AFLS-Sibling	.295*
AFLS-Total	.462*
Authoritarian Mother	-.079
Authoritative Mother	.432*
Permissive Mother	.064
Authoritarian Father	-1.76
Authoritative Father	.303**
Permissive Father	.099
Tobacco Use	-2.31**
Alcohol Use	-2.92**
Inhalant Use	-.166
Marijuana Use	-.229*
Amphetamine Use	-.236*
Other Drug Use	-.258**
Total Drug Use	-.302*

* $p < .05$ (2-tailed)** $p < .01$ (2-tailed)

Table 4

Summary of Hierarchical Regression Analysis for Variables Predicting Total Adolescent Substance Use (N=87)

Variable	B	SE B	β
Step 1			
Self-Esteem Score	-.433	.200	-.254*
Step 2			
Self-Esteem Score	-.516	.220	-.303*
Family Life Satisfaction-Parent	-.064	.159	-.053
Family Life Satisfaction-Sibling	.360	.170	.260*
Step 3			
Self-Esteem Score	-.340	.237	-.199
Family Life Satisfaction-Parent	-.168	.194	-.138
Family Life Satisfaction-Sibling	.280	.177	.202
Authoritarian Mother	.205	.195	.172
Authoritative Mother	.077	.176	.068
Permissive Mother	.190	.220	.147
Authoritarian Father	.170	.161	.167
Authoritative Father	-.144	.167	-.138
Permissive Father	.059	.238	.037

Note. $R^2 = .065$ for Step 1; $\Delta R^2 = .059$ for Step 2; $\Delta R^2 = .105$ for Step 3

* $p < .05$

Table 5

Summary of Backward Regression Analysis for Variables Predicting Adolescent Tobacco Use (N=87)

Variable	B	SE B	β
Step 1			
Self-Esteem Score	-.105	.084	-.164
Family Life Satisfaction-Parent	-.011	.065	-.024
Permissive Mother	.022	.063	.043
Authoritarian Father	.083	.048	.204
Step 2			
Self-Esteem Score	-.111	.075	-.174
Permissive Mother	.018	.059	.036
Authoritarian Father	.082	.048	.203
Step 3			
Self-Esteem Score	-.107	.073	-.168
Authoritarian Father	.085	.047	.210
Step 4			
Authoritarian Father	.095	.047	.233*

Note. $R^2 = .084$ for Step 1; $\Delta R^2 = .000$ for Step 2; $\Delta R^2 = -.001$ for Step 3; $\Delta R^2 = -.028$ for Step 4

* $p < .05$

Table 6

Summary of Backward Regression Analysis for Variables Predicting Adolescent Alcohol Use (N=87)

Variable	B	SE B	β
Step 1			
Self-Esteem Score	-.117	.071	-.202
Family Life Satisfaction-Parent	-.027	.054	-.063
Permissive Mother	.105	.053	.229
Authoritarian Father	.108	.041	.293**
Step 2			
Self-Esteem Score	-.133	.063	-.228*
Permissive Mother	.096	.050	.210
Authoritarian Father	.106	.040	.289**

Note. $R^2 = .208$ for Step 1; $\Delta R^2 = -.003$ for Step2

* $p < .05$

** $p < .01$

Table 7

Summary of Backward Regression Analysis for Variables Predicting Total Adolescent Substance Use (N=87)

Variable	B	SE B	β
Step 1			
Self-Esteem Score	-.284	.200	-.177
Family Life Satisfaction-Parent	-.071	.154	-.060
Permissive Mother	.150	.151	.118
Authoritarian Father	.316	.115	.311**
Step 2			
Self-Esteem Score	-.324	.179	-.202
Permissive Mother	.127	.142	.100
Authoritarian Father	.312	.114	.307**
Step 3			
Self-Esteem Score	-.297	.176	-.185
Authoritarian Father	.332	.112	.326**

Note. $R^2 = .170$ for Step 1; $\Delta R^2 = -.003$ for Step 2; $\Delta R^2 = -.010$ for Step 3

** $p < .01$

Appendix A1**RSES**

Below is a list of statements dealing with your general feelings about yourself. Answer each question as honestly as you can. Mark each statement with the appropriate number response.

1-Strongly Agree 2-Agree 3-Disagree 4-Strongly Disagree

- _____ 1. On the whole, I am satisfied with myself.
- _____ 2. At times I think I am no good at all.
- _____ 3. I feel that I have a number of good qualities.
- _____ 4. I am able to do things as well as most other people.
- _____ 5. I feel I do not have much to be proud of.
- _____ 6. I certainly feel useless at times.
- _____ 7. I feel that I'm a person of worth, at least on an equal plane with others.
- _____ 8. I wish I could have more respect for myself.
- _____ 9. All in all, I am inclined to feel that I am a failure.
- _____ 10. I take a positive attitude toward myself.

Appendix A2

AFLSI

Below is a list of statements dealing with your relationships with your parents and siblings. If you do not have siblings, do not answer questions 8-13. Answer each question honestly using the correct number responses.

1-Strongly disagree 2-Disagree 3-Neutral 4-Agree 5-Strongly agree

- _____ 1. I am satisfied with how much my parent(s) approve of me and the things I do.
- _____ 2. I am satisfied with the amount of freedom my parent(s) give me to make my own choices.
- _____ 3. I am satisfied with the ways my parent(s) want me to think and act.
- _____ 4. I am satisfied with the amount of influence my parent(s) have over my actions.
- _____ 5. I am satisfied with the ways my parent(s) try to control my actions.
- _____ 6. I am satisfied with my parent(s) relationship with each other.
- _____ 7. I am satisfied with my overall relationship with my parent(s).
- _____ 8. I am satisfied with how much my brothers and/or sisters approve of me and the things I do.
- _____ 9. I am satisfied with the amount of freedom my brothers and/or sisters give me to make my own choices.
- _____ 10. I am satisfied with the ways my brothers and/or sisters want me to think and act.
- _____ 11. I am satisfied with the amount of influence my brothers and/or sisters have over my actions.
- _____ 12. I am satisfied with the ways my brothers and/or sisters try to control my actions.
- _____ 13. I am satisfied with my overall relationship(s) with my brothers and/or sisters.

Appendix A3

PAQ

For each of the following pairs of statements, respond with the number response that best describes how the first statement applies to **you and your mother**. There are no right or wrong answers. So don't spend a lot of time on any one item. I am looking for your overall impressions regarding each statement. Be sure not to omit any items.

1-Strongly Disagree 2-Disagree 3-Neutral 4-Agree 5-Strongly Agree

- _____ 1. My mother feels that in a well run home the children should have their way in the family as often as the parents do.
- _____ 2. Even if her children don't agree with her, my mother feels that it is for our own good if we are forced to conform to what she thinks is right.
- _____ 3. Whenever my mother tells me to do something, she expects me to do it immediately without asking any questions.
- _____ 4. Once family policy has been established, my mother discusses the reasoning behind the policy with the children in the family.
- _____ 5. My mother always encourages verbal give-and-take whenever I feel that family rules and restrictions are unreasonable.
- _____ 6. My mother feels that children need to be free to make up their own minds and to do what they want, even if this does not agree with what their parents may want.
- _____ 7. My mother does not allow me to question any decision she makes.
- _____ 8. My mother directs the activities and decisions of the children in the family through reasoning and discipline.
- _____ 9. My mother feels that more force should be used by parents in order to get their children to behave the way they are supposed to.
- _____ 10. My mother does not feel that I need to obey rules and regulations of behavior simply because someone in authority has established them.
- _____ 11. I know what my mother expects of me in my family, but I also feel free to discuss those expectations with my mother when I feel that they are unreasonable.
- _____ 12. My mother feels that wise parents should teach their children early just who is boss in the family.
- _____ 13. My mother seldom gives me expectations and guidelines for my behavior.
- _____ 14. Most of the time, my mother does what the children in the family want when making family decisions.
- _____ 15. My mother consistently gives us direction and guidance in rational and objective ways.
- _____ 16. My mother gets very upset if I try to disagree with her.
- _____ 17. My mother feels that most problems in society would be solved if parents would not restrict their children's activities, decisions and desires.
- _____ 18. My mother lets me know what behavior she expects of me, and if I don't meet those expectations, she punishes me.
- _____ 19. My mother allows me to decide most things for myself without a lot of direction from her.

1-Strongly Disagree 2-Disagree 3-Neutral 4-Agree 5-Strongly Agree

- _____ 20. My mother takes the children's opinions into consideration when making family decisions, but she would not decide something just because the children want it.
- _____ 21. My mother does not view herself as responsible for directing and guiding my behavior.
- _____ 22. My mother has clear standards of behavior for the children in our home, but she is willing to adjust those standards to the needs of each of the individual children in the family.
- _____ 23. My mother gives me direction for my behavior and activities and she expects me to follow her direction, but she is always willing to listen to my concerns and to discuss that direction with me.
- _____ 24. My mother allows me to form my own point of view in family matters and she generally allows me to decide for myself what I am going to do.
- _____ 25. My mother has always felt that most problems in society would be solved if we could get parents to strictly and forcibly deal with their children when they don't do what they are supposed to.
- _____ 26. My mother often tells me exactly what she wants me to do and how she expects me to do it.
- _____ 27. My mother gives me clear direction for my behaviors and activities, but she is also understanding when I disagree with her.
- _____ 28. My mother does not direct the behaviors, activities, and desires of the children in the family.
- _____ 29. I know what my mother expects of me in the family and she insists that I conform to these expectations simply out of respect for her authority.
- _____ 30. If my mother makes a decision in the family that hurts me, she is willing to discuss that decision with me and to admit it if she has made a mistake.

PAQ

For each of the following pairs of statements, respond with the number response that best describes how the first statement applies to **you and your father**. There are no right or wrong answers. So don't spend a lot of time on any one item. I am looking for your overall impressions regarding each statement. Be sure not to omit any items.

1-Strongly Disagree 2-Disagree 3-Neutral 4-Agree 5-Strongly Agree

- _____ 1. My father feels that in a well run home the children should have their way in the family as often as the parents do.
- _____ 2. Even if his children don't agree with him, my father feels that it is for our own good if we are forced to conform to what he thinks is right.
- _____ 3. Whenever my father tells me to do something, he expects me to do it immediately without asking any questions.
- _____ 4. Once family policy has been established, my father discusses the reasoning behind the policy with the children in the family.

1-Strongly Disagree 2-Disagree 3-Neutral 4-Agree 5-Strongly Agree

- _____ 5. My father always encourages verbal give-and-take whenever I feel that family rules and restrictions are unreasonable.
- _____ 6. My father feels that children need to be free to make up their own minds and to do what they want, even if this does not agree with what their parents may want.
- _____ 7. My father does not allow me to question any decision he makes.
- _____ 8. My father directs the activities and decisions of the children in the family through reasoning and discipline.
- _____ 9. My father feels that more force should be used by parents in order to get their children to behave the way they are supposed to.
- _____ 10. My father does not feel that I need to obey rules and regulations of behavior simply because someone in authority has established them.
- _____ 11. I know what my father expects of me in my family, but I also feel free to discuss those expectations with my father when I feel that they are unreasonable.
- _____ 12. My father feels that wise parents should teach their children early just who is boss in the family.
- _____ 13. My father seldom gives me expectations and guidelines for my behavior.
- _____ 14. Most of the time, my father does what the children in the family want when making family decisions.
- _____ 15. My father consistently gives us direction and guidance in rational and objective ways.
- _____ 16. My father gets very upset if I try to disagree with him.
- _____ 17. My father feels that most problems in society would be solved if parents would not restrict their children's activities, decisions and desires.
- _____ 18. My father lets me know what behavior he expects of me, and if I don't meet those expectations, he punishes me.
- _____ 19. My father allows me to decide most things for myself without a lot of direction from him.
- _____ 20. My father takes the children's opinions into consideration when making family decisions, but he would not decide something just because the children want it.
- _____ 21. My father does not view himself as responsible for directing and guiding my behavior.
- _____ 22. My father has clear standards of behavior for the children in our home, but he is willing to adjust those standards to the needs of each of the individual children in the family.
- _____ 23. My father gives me direction for my behavior and activities and he expects me to follow his direction, but he is always willing to listen to my concerns and to discuss that direction with me.
- _____ 24. My father allows me to form my own point of view in family matters and he generally allows me to decide for myself what I am going to do.
- _____ 25. My father has always felt that most problems in society would be solved if we could get parents to strictly and forcibly deal with their children when they don't do what they are supposed to.

1-Strongly Disagree 2-Disagree 3-Neutral 4-Agree 5-Strongly Agree

- _____ 26. My father often tells me exactly what he wants me to do and how he expects me to do it.
- _____ 27. My father gives me clear direction for my behaviors and activities, but he is also understanding when I disagree with him.
- _____ 28. My father does not direct the behaviors, activities, and desires of the children in the family.
- _____ 29. I know what my father expects of me in the family and he insists that I conform to these expectations simply out of respect for his authority.
- _____ 30. If my father makes a decision in the family that hurts me, he is willing to discuss that decision with me and to admit it if he has made a mistake.

Appendix A4**MAODSS**

Answer each of the following questions about tobacco, alcohol and drug use.

- ____ 1. Have you ever smoked cigarettes?
- 1) Never
 - 2) Once or twice
 - 3) Occasionally but not regularly
 - 4) Regularly in the past
 - 5) Regularly now
- ____ 2. How often have you smoked cigarettes in your lifetime?
- 1) Not at all
 - 2) Less than one cigarette per day
 - 3) One to five cigarettes per day
 - 4) About one-half pack per day
 - 5) About one pack per day
 - 6) About one and one-half packs per day
 - 7) Two packs or more per day
- ____ 3. Have you ever taken or used smokeless tobacco (chewing tobacco, snuff, plug, dipping tobacco)?
- 1) Never
 - 2) Once or twice
 - 3) Occasionally but not regularly
 - 4) Regularly in the past
 - 5) Regularly now

- _____ 4. How often have you taken smokeless tobacco in your lifetime?
- 1) Not at all
 - 2) Once or twice
 - 3) Once or twice per week
 - 4) Three to five times per week
 - 5) About once a day
 - 6) More than once a day
- _____ 5. Next you will be asked about drinking alcoholic beverages, including beer, wine, wine coolers, and liquor. Have you ever had any beer, wine, wine coolers, or liquor to drink—more than just a few sips?
- 1) No-**Go to question 9**
 - 2) Yes-**Continue with Question 6**
- _____ 6. On how many occasions have you had alcoholic beverages to drink in your lifetime?
- 1) 0 Occasions
 - 2) 1-2 Occasions
 - 3) 3-5 Occasions
 - 4) 6-9 Occasions
 - 5) 10-19 Occasions
 - 6) 20-39 Occasions
 - 7) 40 or More
- _____ 7. On occasions that you drink alcoholic beverages, how often do you drink enough to feel pretty high?
- 1) On none of the occasions
 - 2) On few of the occasions
 - 3) On about half of the occasions
 - 4) On most of the occasions
 - 5) On nearly all of the occasions

- ____ 8. Think back over the LAST TWO WEEKS. How many times have you had five or more drinks in a row? (A "drink" is a glass of wine, a bottle of beer, a wine cooler, a shot glass of liquor, or a mixed drink.)
- 1) None
 - 2) Once
 - 3) Twice
 - 4) Three to five times
 - 5) Six to nine times
 - 6) Ten or more times

The next major section of this questionnaire deals with various other drugs. There is a lot of talk these days about this subject, but not enough accurate information. Therefore, we still have a lot to learn about the actual experiences and attitudes of people your age.

I hope that you can answer all the questions, but if you find one which you feel you cannot answer honestly, I would prefer that you leave it blank. Remember that your answers are anonymous.

- ____ 9. On how many occasions (if any) have you used marijuana (grass, pot) or hashish (hash, hash oil) in your lifetime?
- 1) 0 Occasions
 - 2) 1-2 Occasions
 - 3) 3-5 Occasions
 - 4) 6-9 Occasions
 - 5) 10-19 Occasions
 - 6) 20-39 Occasions
 - 7) 40 or More

____ 10. On how many occasions (if any) have you used LSD ("acid") in your lifetime?

- 1) 0 Occasions
- 2) 1-2 Occasions
- 3) 3-5 Occasions
- 4) 6-9 Occasions
- 5) 10-19 Occasions
- 6) 20-39 Occasions
- 7) 40 or More

____ 11. On how many occasions (if any) have you used psychedelics other than LSD
(like PCP, mescaline, peyote, psilocybin) in your lifetime?

- 1) 0 Occasions
- 2) 1-2 Occasions
- 3) 3-5 Occasions
- 4) 6-9 Occasions
- 5) 10-19 Occasions
- 6) 20-39 Occasions
- 7) 40 or More

____ 12. On how many occasions (if any) have you taken "crack" cocaine (cocaine in
chunk or rock form) in your lifetime?

- 1) 0 Occasions
- 2) 1-2 Occasions
- 3) 3-5 Occasions
- 4) 6-9 Occasions
- 5) 10-19 Occasions
- 6) 20-39 Occasions
- 7) 40 or More

____ 13. On how many occasions (if any) have you taken cocaine in any other form in your lifetime?

- 1) 0 Occasions
- 2) 1-2 Occasions
- 3) 3-5 Occasions
- 4) 6-9 Occasions
- 5) 10-19 Occasions
- 6) 20-39 Occasions
- 7) 40 or More

Amphetamines have been prescribed by doctors to help people lose weight or give people more energy. They are sometimes called uppers, ups, speed, bennies, dexies, pep pills, and diet pills. Drugstores are not supposed to sell them without a prescription from a doctor. Amphetamines do NOT include an non-prescription drugs, such as over the counter diet pills (like Dexatrim®) or stay awake pills (like No-Doz®), or any mail order drugs.

____ 14. On how many occasions (if any) have you taken amphetamines on your own—that is, without a doctor telling you to take them in your lifetime?

- 1) 0 Occasions
- 2) 1-2 Occasions
- 3) 3-5 Occasions
- 4) 6-9 Occasions
- 5) 10-19 Occasions
- 6) 20-39 Occasions
- 7) 40 or More

Barbiturates are sometimes prescribed by doctors to help people relax or get to sleep. They are sometimes called downs, downers, goofballs, yellows, reds, blues, rainbows.

____ 15. On how many occasions (if any) have you taken barbiturates on your own-that is, without a doctor telling you to take them in your lifetime?

- 1) 0 Occasions
- 2) 1-2 Occasions
- 3) 3-5 Occasions
- 4) 6-9 Occasions
- 5) 10-19 Occasions
- 6) 20-39 Occasions
- 7) 40 or More

Tranquilizers are sometimes prescribed by doctors to calm people down, quiet their nerves, or relax their muscles. Librium, Valium, and Miltown are all tranquilizers.

____ 16. On how many occasions (if any) have you taken tranquilizers on your own-that is, without a doctor telling you to take them in your lifetime?

- 1) 0 Occasions
- 2) 1-2 Occasions
- 3) 3-5 Occasions
- 4) 6-9 Occasions
- 5) 10-19 Occasions
- 6) 20-39 Occasions
- 7) 40 or More

____ 17. On how many occasions (if any) have you used heroin (smack, horse, skag) in your lifetime?

- 1) 0 Occasions
- 2) 1-2 Occasions
- 3) 3-5 Occasions
- 4) 6-9 Occasions
- 5) 10-19 Occasions
- 6) 20-39 Occasions
- 7) 40 or More

There are a number of narcotics other than heroin such as methadone, opium, morphine, codeine, Demerol, paregoric, talwin, and laudanum. These are sometimes prescribed by doctors.

____ 18. On how many occasions (if any) have you taken narcotics other than heroin on your own-that is, without a doctor telling you to take them in your lifetime?

- 1) 0 Occasions
- 2) 1-2 Occasions
- 3) 3-5 Occasions
- 4) 6-9 Occasions
- 5) 10-19 Occasions
- 6) 20-39 Occasions
- 7) 40 or More

____ 19. On how many occasions (if any) have you sniffed glue, or breathed the contents of aerosol spray cans, or inhaled other gases or sprays in order to get high in your lifetime?

- 1) 0 Occasions
- 2) 1-2 Occasions
- 3) 3-5 Occasions
- 4) 6-9 Occasions
- 5) 10-19 Occasions
- 6) 20-39 Occasions
- 7) 40 or More

Steroids, or anabolic steroids, are sometimes prescribed by doctors to promote healing from certain types of injuries. Some athletes, and others, have used them to try to increase athletic performance or muscle development.

____ 20. On how many occasions (if any) have you taken steroids, on your own-that is, without a doctor telling you to take them in your lifetime?

- 1) 0 Occasions
- 2) 1-2 Occasions
- 3) 3-5 Occasions
- 4) 6-9 Occasions
- 5) 10-19 Occasions
- 6) 20-39 Occasions
- 7) 40 or More

____ 21. On how many occasions (if any) have you taken any of these drugs (like heroin, cocaine, amphetamines or steroids) by injection with a needle...(Do not include anything you took under a doctor's orders) in your lifetime?

- 1) 0 Occasions
- 2) 1-2 Occasions
- 3) 3-5 Occasions
- 4) 6-9 Occasions
- 5) 10-19 Occasions
- 6) 20-39 Occasions
- 7) 40 or More

Appendix B

****It is important that your answers remain confidential, and be for research purposes only. For this reason, please answer these questions anonymously, and without assistance from friends or teachers.****

Demographic Data

Please read and answer each question.

- 1) Gender: Male Female
- 2) Age: _____
- 3) Grade: 6th 7th 8th
- 4) Ethnicity: White/Caucasian
 African American
 Hispanic/Latino
 Asian
 Native American
 Other: _____
- 5) Do you have any brothers or sisters? Yes No

 If yes, how many brothers? _____ sisters? _____
- 6) My parents are: Married Divorced Separated Never Married

 If they are divorced or separated:

 A) Which parent do you live with?

 Mom Dad Other _____ (ex: grandparent, aunt)
- B) Is your mother remarried? Yes No

 Is your father remarried? Yes No
- C) Do you have any stepbrothers, stepsisters, half brothers, half sisters? Yes No

 If so, how many stepbrothers? _____ stepsisters? _____ half brothers? _____
 half sisters? _____

Appendix C

Parental Permission Form Adolescent Behaviors & Beliefs

I am conducting a study as a part of my graduate thesis for Eastern Illinois University. The goal of this study is to learn more about adolescent family life and how it affects adolescent behaviors and beliefs. Students will be asked to answer questions regarding their relationship with their parents and siblings and how they view themselves. There is also a section where students will be asked whether or not they have tried alcohol and/or drugs.

Your child's participation in this survey will be **completely confidential and anonymous** and will not be viewed by anyone other than the researchers. I am only interested in the group's responses as a whole.

If you agree to allow your child to participate, please read the following statement and sign below:

I realize that my child's participation is completely voluntary, and that he/she may choose to quit this study at any time and will not be penalized. I also realize that his/her answers will be confidential and anonymous.

I give my consent for _____ to participate in
(Student's Name)

the study Adolescent Behaviors & Beliefs.

Signed _____ Date: _____
(Parent or Guardian)

☐ If you would like a copy of the summary of the research findings please check the box to the left and provide your mailing address below.

(Name)

(Street Address or P.O. Box)

(City, State, Zip Code)

For more information contact:

Megan Cox
Graduate Student
Eastern Illinois University
meg1999@hotmail.com

Dr. Sharma
Psychology Professor
Eastern Illinois University
(217) 581-2127

Appendix D

Adolescent Behaviors & Beliefs

Informed Consent Form

The goal of this study is to learn more about your family life and how it affects your behaviors and beliefs. You will be asked to answer questions regarding your relationship with your parents and siblings and how you view yourself. There is also a section where you will be asked whether or not you have tried alcohol and/or drugs. This survey should take approximately 20-30 minutes to complete.

Your participation in this survey will be completely confidential. Other than signing this form, do not put your name on any of the materials you complete in the study. I am only interested in the group's responses as a whole.

If you agree to participate, please read the following statement and sign below:

The procedures to be completed by me in this study have been explained to me. I realize that my participation is completely voluntary, and that I may choose to quit this study at any time and I will not be penalized. I also realize that my answers will be confidential and anonymous.

I give my consent to participate in the study Adolescent Behaviors & Beliefs.

Signed _____ Date: _____

Print Name _____

For more information contact:

Megan Cox
Graduate Student
Eastern Illinois University
meg1999@hotmail.com

Dr. Sharma
Psychology Professor
Eastern Illinois University
(217) 581-2127

Appendix E

Adolescent Behaviors & Beliefs

Debriefing Form

Thank you for your participation in this study. The goal of the study is to determine how adolescents' beliefs about their families and themselves affect their behavior, specifically substance use. This study is designed to determine which variables best predict adolescent substance use in order to develop better prevention and intervention strategies for younger adolescents.

If you have any questions or comments about this study, please feel free to contact Megan Cox by e-mail at meg1999@hotmail.com or Dr. Sharma at (217) 581-2127.

If you would like more information regarding adolescent substance use, the following resources may be helpful:

The Pavilion-Champaign
(Alcohol and Drug Treatment Center for
children, adolescents, and adults)

1-800-373-1700

An exhaustive web-site with alcohol and
drug information as well as helpful links
to other resources

www.health.org

Cheryl Perez
Guidance Counselor
Neoga Jr/Sr High School

895-2205